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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,103	02/15/2006	Thierry Lagarde	15675P537	5573
8791 7590 12/15/2008 BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP 1279 OAKMEAD PARKWAY SUNNYVALE, CA 94085-4040				
EXAMINER				
VINIL LAN				
ART UNIT		PAPER NUMBER		
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/501,103

**Applicant(s)**

LAGARDE ET AL.

**Examiner**

LAN VINH

**Art Unit**

1792

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 October 2008.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.  
4a) Of the above claim(s) 10 and 12 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-9 and 11 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Election/Restrictions***

1. Newly submitted claim 12 directed to an invention ( Group II) that is independent or distinct from the invention originally claimed for the reason discussed in paragraph 1 of the previous office action

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 12 withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Applicant's election with traverse of Group I in the reply filed on 10/23/2008 is acknowledged. The traversal is on the ground(s) that the sheets or membranes mentioned in claims 10, 12 have been fabricated by the method defined in claims 1 to 8, which means that the sheets or membranes or filters obtained have the thickness specified in element A) of claim 1 and the aspect ratio specified in element F)/common technical limitation of claim 1.

This is not found persuasive because the claimed/expression special technical feature, considered as a whole, does not make over the prior art since WO 00/29167 teaches the formation of micron size through holes in filter membranes (see the abstract).

The requirement is still deemed proper and is therefore made FINAL.

***Claim Objections***

2. Claims 4-6, 7-9, 11 objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim can not depend from any other multiple dependent claim. For the purpose of examination, claims 4-6, 7-9, 11 are best understood as depending on claim 1

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 9, 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Van Rijn (US 5,753,014)

Claims 9, 11 are considered to be product-by-process claims. It is noted that section 2113 [R-I] of the MPEP states: PRODUCT-BY-PROCESS CLAIMS ARE NOT LIMITED TO THE MANIPULATIONS OF THE RECITED STEPS, ONLY THE STRUCTURE IMPLIED BY THE STEPS

"[Even though product-by-process claims are limited by and defined by the process determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (citations omitted)

>The structure implied by the process steps should be considered when assessing the patentability of product-by-process claims over the prior art, especially where the product can only be defined by the process steps by which the product is made, or where the manufacturing process steps would be expected to impart distinctive structural characteristics to the final product. See, e.g., *In re Garnero*, 412 F.2d 276, 279, 162 USPQ 221,223 (CCPA 1979) (holding "interbonded by interfusion" to limit structure of the claimed composite and noting that terms such as "welded, .... intermixed," "ground in place," "press fitted," and "etched" are capable of construction as structural limitations.) ONCE A PRODUCT APPEARING TO BE SUBSTANTIALLY IDENTICAL IS FOUND AND A 35 U.S.C. 102/103 REJECTION MADE, THE BURDEN SHIFTS TO THE APPLICANT TO SHOW AN UNOBVIOUS DIFFERENCE

Thus, it is the patentability of the sheets or membrane/product that is in issue and not the process by which it made

Rijn discloses a membrane/membranes with pores having a size between 5 nm and 5  $\mu\text{m}$  (col 15, lines 15-17, fig. 12B). Although, Rijn does not disclose the specific claimed process steps, since claims 9, 11 drawn to product-by-process claims it is the product/membrane is the subject of the analysis. Therefore, Rijn discloses the membrane/structure that is the same or substantially the same as the claimed membranes of the instant inventions

4. Claims 9, 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Perrona et al (US 6,478,968)

Perrona discloses a membrane/membranes with pores having a size between 1 nm and 1  $\mu\text{m}$  ( col 1, lines 55-59). Although, Perrona does not disclose the specific claimed process steps , since claims 9, 11 drawn to product-by -process claims it is the product/membrane is the subject of the analysis. Therefore, Perrona discloses the membrane/structure that is the same or substantially the same as the claimed membranes of the instant inventions

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Rijn (US 5,753,014) in view of Wolfe et al (US 5,728,261)

Van Rijn discloses a method for manufacturing membrane filter. The method comprises:

preparing a sheet/membrane layer having thickness of 5  $\mu\text{m}$ , suitable for being etched by a lithographic operation ( col 5, lines 20-25), the membrane comprises metal (col 3, lines 1-10)

making a mask on a face of the membrane layer/sheet (col 5, lines 35-36)

depositing a layer of photosensitive material/resin on the mask (col 5, lines 35-40)

making through holes in the layer of resin by photolithography technique/transferring an image by interference, matching the configuration of pores to be made (col 5, lines 40-45; fig. 14a)

etching (plasma) through the mask via the pores in the layer of resin ( col 5, lines 55-60; fig. 15a)

anisotropically etching through the sheet from the pores in the mask in order to make pores in the sheet having an aspect ratio  $10-20 > 5$ , where aspect ratio is defined as the ratio of the depth of the pores to their diameter (col 5, lines 60-67)

Unlike the instant claimed invention as per claim 1, Van Rijn fails to disclose that the mask presenting etching selectivity  $S$  of at least 5, where etching selectivity  $S$  is defined as the ratio of the speed  $V_F$  at which the material of the sheet is etched to the speed  $V_M$  at which the material of the mask is etched

Wolfe discloses a method for RIE etch comprises a step of etching a mask on a silicon membrane where etching selectivity is defined as the ratio of the speed at which the material of the silicon/sheet is etched to the speed at which the material of the mask is etched (col 10, lines 1-26)

Since Van Rijn is concerned with a step of etching a membrane layer/sheet having a mask, one skilled in the art at the time the invention was made would have found it obvious that Van Rijn etching step would have resulted, in view of Wolfe teaching, in the speed  $V_F$  at which the material of the sheet is etched to the speed  $V_M$  at which the material of the mask is etched and the specific etching selectivity  $S$  would have been achieved by varying the etching speed of the two material in order to optimize the etch

selectivity in order to minimize distortion of the mask during use as taught in Wolf (col 10, lines 38-45)

Regarding claim 2, Van Rijn discloses cutting the sheet up into individual membranes (fig. 12b)

The limitations of claims 3, 4, 5, 6 have been discussed above

Regarding claim 7, Van Rijn discloses performing the operations in succession during sequential travel of the membrane layer/sheet (col 7, lines 15-20)

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Van Rijn (US 5,753,014) in view of Wolfe et al (US 5,728,261) and further in view of Moy et al (US 6,296,9610)

Van Rijn as modified by Wolf has been described above. Unlike the instant claimed invention as per claim 8, Van Rijn and Wolf fails to disclose an operation of rolling the sheet or a membrane cut out from the sheet into a cylinder and bonding together its edges.

Moy discloses a method for manufacturing sheet comprises the steps of rolling the sheet or a membrane cut out from the sheet into a cylinder and bonding together its edges (col 20, lines 5-10, 60-67; fig. 12A)

One skilled in the art at the time the invention was made would have found it obvious to modify Van Rijn and Wolf method to include the steps of rolling the sheet cut out from the sheet into a cylinder and bonding together its edges in order to effectively cross-



bond and thereby consolidate the sheets to each other as taught in Moy (col 20, lines 35-40)

### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAN VINH whose telephone number is (571)272-1471. The examiner can normally be reached on M-F 8:30-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on 571 272 1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lan Vinh/  
Primary Examiner, Art Unit 1792

